

In the Claims

1.-34. (Cancelled)

35. (Currently Amended) A lubricant-feed-state monitoring sensor that monitors the feed state of lubricant by detecting the supply of lubricant to a device fed with oily or fatty lubricant or a lubricant feed pipe that feeds lubricant to the device, comprising:

a T-shaped member including a main pipe portion having a lubricant passage connected to the lubricant feed pipe and a joint pipe portion extending substantially vertically from the main pipe portion, and

a detector insertion portion having a passageway and extending substantially vertically from a middle portion of the ~~lubricant~~ passage in the joint pipe portion, into which passageway a detector is inserted; wherein the detector is disposed such that a first end portion of the detector is fixed to a top portion of the detector insertion portion, a middle portion extends along the passageway and a second end portion is positioned in the lubricant passage without restraint, the detector undergoing bending deflection by displacement of the second end portion due to the flow of the lubricant, and the detector having a piezoelectric element that generates voltage by the bending deflection.

36. (Previously Presented) The sensor according to claim 35, wherein the detector further comprises a heat shrinkable film made of a flexible material that coats the piezoelectric element.

37. (Currently Amended) A method of monitoring a feed state of lubricant to a device fed with lubricant with a sensor mounted to the device or a lubricant feed pipe connected to the device comprising:

disposing the sensor to undergo bending deflection by lubricant flow when the lubricant is fed;

converting strain generated by the sensor due to the bending deflection to an electrical signal, wherein the sensor is a piezoelectric element that generates voltage by the bending deflection;

~~measuring peak~~ detecting voltage of the electrical signal; ~~by~~

performing peak hold processing on the detected voltage to obtain peak voltage;

and

determining that the lubricant feed state is abnormal when the peak voltage is in a predetermined range[[,]]~~determining that the lubricant feed state is abnormal~~.

38. (Previously Presented) The method according to claim 37, wherein a lower threshold and an upper threshold are set for the peak voltage in advance; and when the peak voltage falls below the lower threshold, determining that the amount of lubricant has decreased or stopped, and when the peak voltage exceeds the upper threshold, determining that the part downstream from the sensor is clogged.

39. (Previously Presented) The method according to claim 37, wherein, when the sensor is a piezoelectric element, capacitance of the sensor is measured after monitoring of the lubricant feed state has been started, and when the capacitance of the sensor is less than a predetermined threshold, determining that the sensor is abnormal, and abnormality due to the abnormal sensor is removed from the determination on abnormality of feed state of lubricant based on the peak voltage, on the basis of the determination on the sensor abnormality.

40. (Previously Presented) The method according to claim 38, wherein, when the sensor is a piezoelectric element, capacitance of the sensor is measured after monitoring of the lubricant feed state has been started, and when the capacitance of the sensor is less than a predetermined threshold, determining that the sensor is abnormal, and abnormality due to the abnormal sensor is removed from the determination on abnormality of feed state of lubricant based on the peak voltage, on the basis of the determination on the sensor abnormality.